

REMARKS

Claims 1 and 3-29 are currently in this application. Claim 2 has been cancelled without prejudice.

Claim 1 has been amended to require that the nonwoven layer is a spunbond nonwoven layer. Claims 8 and 10 have also been similarly amended. Dependent claims 3 and 9 have been amended to correspond to the changes to the independent claims. Support for the amendments may be found throughout the specification and in originally filed claim 2.

Reconsideration is respectfully requested.

I. Objections to the Drawings

The drawings have been objected to for failing to comply with 37 C.F.R. 1.84(p)(5) because they do not include the reference "406." Applicants have amended the specification at paragraph 0082 to correct a typographical error. The reference numeral "406" has been changed to "412" that is shown in the drawings. Support for the correction may be found in paragraph 0081 where a filter paper layer 412 is described. No new matter has been added with the amendment to the specification.

Applicants respectfully request that the objection to the drawings be withdrawn.

II. Claim rejections under 35 U.S.C. §102

Claims 1-5, 7-10 and 12-14 have been rejected under 35 U.S.C. §102(b) as being anticipated by Schultink (EP 960645 A2) as evidenced by Chand et al. (Structure and properties of polypropylene fibers during thermal bonding, *Thermochimica Acta* 367-368 (2001) 155-160.). Claim 2 has been cancelled, thereby mooted the rejection of claim 2.

Applicants respectfully traverse the rejection of claims 1, 3-5, 7-10 and 12-14 based on Schultink.

Schultink is directed to a disposable vacuum filter bag constructed of layers which include a high-air-permeability first layer positioned upstream in the direction of air flow of a second filtration layer. (Abstract.) The Examiner refers to Table IV and

Figure 6 for a discussion of pore size. The Examiner also refers to page 6, lines 5-20 for a discussion of fibers being bonded together.

Figure 6 illustrates a three-layer vacuum cleaner bag including a dry-laid special filter paper 34, a meltblown layer 35 and a spunbond layer 36. Table IV includes Example 6 that refers to the layers shown in Figure 3. As shown in the first line of Table IV, the parameters have been determined for the laminate of the spunbond 36 and meltbond 35 layers denoted by "6(36+35)." The parameters for the dry-laid special filter paper 34 are determined separately, denoted by "6/34." The mean pore diameter given in Example 6 is given for the laminate of the spunbond and meltbond layers 36+35 together. There is no separate pore diameter given for the spunbond layer alone. Clearly, Schultink fails to teach or suggest at least one region of a spunbond nonwoven layer having an average pore size smaller than 50 μm .

In addition, the portion of the specification cited by the Examiner at page 6, lines 5-20, refers to a nonwoven of spunbond polymer fibers. Materials and basis weight are discussed, however, bonding of the spunbond woven is clearly not taught or suggested. Further, the Schultink reference is silent as to the inhibition of the movement of fibers of the spunbond nonwoven relative to each other. Bonding of fibers is disclosed in Schultink with reference to a dry-laid high capacity paper (layer 34 in Figure 6) on page 7, lines 5-20 with no mention of any spunbond layer. There is also no pore diameter given for the dry-laid high capacity paper. Schultink clearly fails to teach or suggest a spunbond layer including fibers that are bonded together such that a movement of the fibers relative to each other in a direction parallel to the surface of the layer is inhibited.

In contrast, claims 1, 8 and 10 require at least one region of a spunbond nonwoven layer having an average pore size smaller than 50 μm . Claims 1, 8 and 10 also require that the spunbond layer includes fibers that are bonded together such that a movement of the fibers relative to each other in a direction parallel to the surface of the layer is inhibited. The features are clearly not taught by Schultink.

Therefore, Applicants respectfully request that the rejection of claims 1-5, 7-10 and 12-14 under 35 U.S.C. §102(b) be withdrawn.

III. Claim rejections under 35 U.S.C. §103

A. Claim 6

Claim 6 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Schultink in view of Ohue (U.S. 4,663,222).

Applicants respectfully traverse the rejection of claim 6 as being unpatentable over Schultink in view of Ohue.

Schultink has been discussed above with respect to claim 1 from which claim 6 depends. Ohue has been cited for disclosing the application of a hotmelt adhesive. Ohue is directed to a water-repellant nonwoven fabric made of a melt-blown fiber. (Abstract.) Ohue fails to make up the deficiencies of Schultink. Schultink and Ohue, individually or in combination, fail to teach or suggest all the limitations of claim 6.

Therefore, Applicants respectfully request that the rejection of claim 6 under 35 U.S.C. §103(a) be withdrawn.

B. Claim 11

Claim 11 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Schultink in view of Fluent (U.S. 4,941,309).

Applicants respectfully traverse the rejection of claim 11 as being unpatentable over Schultink in view of Fluent.

Schultink has been discussed above with respect to claim 10 from which claim 11 depends. Fluent has been cited for disclosing application of a hotmelt to obtain bonding of the fibers. (Abstract.) Fluent fails to make up the deficiencies of Schultink. Schultink and Fluent, individually or in combination, fail to teach or suggest all the limitations of claim 11.

Therefore, Applicants respectfully request that the rejection of claim 11 under 35 U.S.C. §103(a) be withdrawn.

C. Claims 15-25, 28 and 29

Claims 15-25, 28 and 29 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Schultink.

Applicants respectfully traverse the rejection of claims 15-25, 28 and 29 as being unpatentable over Schultink.

Applicants' claims 15 and 22 require a filter paper layer having a smaller surface area than the filter structure. As defined in paragraph 0045, the term "nonwoven" excludes papers such that conventional filter papers do not fall under the term "nonwoven" as defined by Applicants. Schultink also clearly distinguishes conventional filter paper (see paragraph 0027) and wet-laid or dry-laid high capacity paper (see paragraphs 0030-0051). As defined in Applicants' specification at paragraph 0045, wet-laid or dry-laid high capacity paper of Schultink are nonwoven layers. In the examples given in Schultink, including Figure 8H cited by the Examiner, only nonwoven layers are disclosed. No paper layers are disclosed. Clearly, Schultink fails to teach or suggest a filter **paper** layer. As acknowledged by the Examiner, Schultink fails to teach or suggest a layer having a smaller surface area than the filter structure

In contrast, Applicants' claims 15 and 22 require a filter paper layer. Claims 15 and 22 further require that the filter paper layer has a smaller surface area than the filter structure.

Therefore, Applicants respectfully request that the rejection of claims 15-25, 28 and 29 under 35 U.S.C. §103(a) be withdrawn.

D. Claim 26

Claim 26 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Schultink in view of Lutz (Polypropylene: An A-Z Reference, pp. 301-303).

Applicants respectfully traverse the rejection of claim 26 as being unpatentable over Schultink in view of Lutz.

Schultink has been discussed above with respect to claim 1 from which claim 26 depends. Lutz has been cited for pulverized polymer. Lutz fails to make up the deficiencies of Schultink. Schultink and Lutz, individually or in combination, fail to teach or suggest all the limitations of claim 26.

Therefore, Applicants respectfully request that the rejection of claim 26 under 35 U.S.C. §103(a) be withdrawn.

E. Claim 27

Claim 27 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Schultink in view of Fluent and further in view of Lutz.

Applicants respectfully traverse the rejection of claim 11 as being unpatentable over Schultink in view of Fluent.

Schultink and Fluent have been discussed above with respect to claim 10 from which claim 27 depends. Lutz has been cited for pulverized polymer. Lutz and Fluent fail to make up the deficiencies of Schultink. Schultink, Fluent and Lutz, individually or in combination, fail to teach or suggest all the limitations of claim 27.

Therefore, Applicants respectfully request that the rejection of claim 27 under 35 U.S.C. §103(a) be withdrawn.

IV. Summary

Applicants respectfully assert that the claims are in condition for early allowance. Allowance of the claims is earnestly solicited. Should the Examiner wish to discuss any of the above submissions in more detail, the Examiner is asked to please call the undersigned at the telephone number listed below.

Respectfully submitted,

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